

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A data processing system defining a spatial arrangement of structural components relative to each other within an installation space, comprising:

~~a configuration tool;~~

~~a drawing module;~~

an input configured to input general parameters of a selected installation space into ~~said a configuration tool, said configuration tool including a processor connected to a database and a drawing module, wherein:~~

a said database is configured to store first data ~~that defines~~ defining a space-specific geometry of said selected installation space, ~~and to then load said first data and display said first data in said drawing module, and to store second data that respectively~~ defining, geometrically, ~~defines~~ structural components that are to be arranged in said selected installation space; and

a said processor is configured to provide said second data together with said first data into said drawing module, to provide a rule set ~~that defines~~ defining at least customer-specific requirements of a customer for whom said structural components are to be arranged in said installation space, and to process said first data and said second data together according to said rule set in said configuration tool so as to automatically define a spatial arrangement of said structural components relative to each other within said installation space.

Claim 2 (Currently Amended): The system according to claim 1, wherein said processor ~~further optimizes~~ is configured to optimize a configuration of said structural components relative to each other within said installation space with respect to at least one of

a functional position of each one of said structural components and a quantity of said structural components arranged in said installation space.

Claim 3 (Currently Amended): The system according to claim 1, wherein said processor ~~further carries out~~ is configured to perform ~~[[a]] functional and data analysis analyses~~ so as to mathematically describe said structural components and to mathematically represent said structural components according to position rules.

Claim 4 (Currently Amended): The system according to claim 1, further comprising a document generating tool including a processing program, and wherein said processor ~~further uses~~ is configured to use said generating tool and ~~generates~~ generate production documents including at least one of drawings, parts lists, materials lists, video preliminary examinations, plotter plans, installation plans, production plans, and ~~or~~ or production contracts, corresponding to said spatial arrangement defined by said processor.

Claim 5 (Currently Amended): The system according to claim 4, wherein:
said production documents include said drawings ~~[[,]]~~ ; and
said processor ~~further transfers~~ is configured to transfer drawing data representing said drawings via a plot script from said document generating tool to a computer aided design (CAD) output system that outputs said drawings.

Claim 6 (Currently Amended): The system according to claim 4, wherein said processor ~~further transfers~~ is configured to transfer said production documents via an interface from said document generating tool to a technical administrative system.

Claim 7 (Original): The system according to claim 6, wherein said technical administrative system comprises a production planning system.

Claim 8 (Original): The system according to claim 1, wherein said selected installation space comprises at least one partial space within an aircraft cabin of a selected aircraft type.

Claim 9 (Currently Amended): The system according to claim 8, wherein:
said at least one partial space within said aircraft cabin comprises a service channel in said aircraft cabin [[,]] ; and

said structural components to be installed in said service channel include any one or more of passenger service units, lights, air vents, loudspeakers, oxygen supply units, video monitors, informational displays, ~~and~~ or control switches.

Claim 10 (Currently Amended): The system according to claim 9, wherein:
said database is further configured to store third data ~~that~~ respectively ~~defines~~ defining additional cabin outfitting components including one or more of galleys, toilets, storage cabinets, passenger seats, ~~and~~ or baggage compartments arranged according to a customer-specified cabin layout[[,]] ; and ~~wherein~~

said processor ~~further processes~~ is configured to process said third data together with said first data and said second data according to said rule set to define said spatial arrangement of said structural components.

Claim 11 (Currently Amended): The system according to claim 10, wherein:
said database is further configured to store fourth data ~~that~~ respectively ~~defines~~
defining surrounding components including one or more of cabin dividers, baggage
compartments, video monitors, ~~and~~ or display screens of which the arrangement will limit ~~the~~
a possible range of variants of said spatial arrangement[[,]] ; and ~~wherein~~
said processor ~~further processes~~ is configured to process said fourth data together with
said first data, said second data, and said third data according to said rule set to define said
spatial arrangement of said structural components.

Claim 12 (Original): The system according to claim 11, wherein said surrounding
components include said baggage compartments, which further serve as carriers for
equipment and for electrical interfaces of said service channel.

Claim 13 (Currently Amended): The system according to claim 12, wherein:
said fourth data define said baggage compartments as a row of successive ones of said
baggage compartments[[,]] ; and ~~wherein~~
said processor automatically adapts said fourth data defining said row of baggage
compartments according to said rule set.

Claim 14 (Currently Amended): The system according to claim 10, wherein said third
data ~~is~~ are selected and read out from a cabin outfitting component reference database in
which said third data are stored among data defining plural different available cabin outfitting
components.

Claim 15 (Currently Amended): The system according to claim 9, wherein:
said database stores said second data in a component reference database that contains data defining plural different available structural components[[],] ; and ~~wherein~~
said second data ~~is~~ are selected and read out from said component reference database.

Claim 16 (Currently Amended): The system according to claim 9, wherein:
said at least one partial space within said aircraft cabin further comprises another space other than said service channel in said aircraft cabin[[],] ; and ~~wherein~~
said processor further defines a spatial arrangement of other components within said another space.

Claim 17 (Original): The system according to claim 8, wherein said database loads a data set defining a customer-approved preliminary cabin layout into said data processing system through a data input interface.

Claim 18 (Original): The system according to claim 1, wherein said database stores said second data in at least one reference database that contains parametric data defining various different structural components.

Claim 19 (Original): The system according to claim 1, wherein said installation space is a space within a transport vehicle other than an aircraft.

Claim 20 (Original): The system according to claim 1, wherein said installation space is an industrial plant, and said arrangement of structural components forms assembled equipment in said plant.

Claim 21 (Currently Amended): A data processing system defining a spatial arrangement of structural components relative to each other within an installation space, comprising:

means for configuring aspects of said structural components and said installation space;

means for drawing aspects of said structural components and said installation space;

means for inputting general parameters of a selected installation space into said means for configuring;

means for storing first data ~~that defines~~ defining a space-specific geometry of said selected installation space, ~~and to then load for loading said first data and display displaying~~ said first data in said means for drawing, and ~~to store~~ for storing second data that respectively geometrically define structural components that are to be arranged in said selected installation space; and

means for processing ~~for providing~~ said second data together with said first data ~~into~~ in said means for drawing, for providing a rule set that defines at least customer-specific requirements of a customer for whom said structural components are to be arranged in said installation space, and for processing said first data and said second data together according to said rule set in said means for configuring so as to automatically define a spatial arrangement of said structural components relative to each other within said installation space, wherein

said means for configuring includes said means for processing and said means for processing are connected to said means for storing and said means for drawing.

Claim 22 (Currently Amended): The system according to claim 21, wherein said means for processing ~~further optimizes~~ is configured to optimize a configuration of said

structural components relative to each other within said installation space with respect to at least one of a functional position of each one of said structural components and a quantity of said structural components arranged in said installation space.

Claim 23 (Currently Amended): The system according to claim 21, wherein said means for processing ~~further carries out a~~ is configured to perform functional and data ~~analysis analyses~~ so as to mathematically describe said structural components and to mathematically represent said structural components according to position rules.

Claim 24 (Currently Amended): The system according to claim 21, further comprising means for generating a document including a processing program, ~~and wherein~~ said means for processing ~~further uses~~ is configured to use said means for generating and ~~generates generate~~ production documents including at least one of drawings, parts lists, materials lists, video preliminary examinations, plotter plans, installation plans, production plans, ~~and or~~ production contracts, corresponding to said spatial arrangement defined by said means for processing.

Claim 25 (Currently Amended): The system according to claim 24, wherein:
said production documents include said drawings[[,]] ; and
said means for processing ~~further transfers~~ is configured to transfer drawing data representing said drawings via a plot script from said document generating tool to a computer aided design (CAD) output system that outputs said drawings.

Claim 26 (Currently Amended): The system according to claim 24, wherein said means for processing ~~further transfers~~ is configured to transfer said production documents via an interface from said document generating tool to a technical administrative system.

Claim 27 (Original): The system according to claim 26, wherein said technical administrative system comprises a production planning system.

Claim 28 (Original): The system according to claim 21, wherein said selected installation space comprises at least one partial space within an aircraft cabin of a selected aircraft type.

Claim 29 (Currently Amended): The system according to claim 28, wherein:
said at least one partial space within said aircraft cabin comprises a service channel in said aircraft cabin[[],] ; and

said structural components to be installed in said service channel include any one or more of passenger service units, lights, air vents, loudspeakers, oxygen supply units, video monitors, informational displays, ~~and~~ or control switches.

Claim 30 (Currently Amended): The system according to claim 29, wherein:
said means for storing further stores third data ~~that~~ respectively ~~defines~~ defining additional cabin outfitting components including one or more of galleys, toilets, storage cabinets, passenger seats, ~~and~~ or baggage compartments arranged according to a customer-specified cabin layout[[],] ; ~~and wherein~~

said means for processing ~~further processes~~ is configured to process said third data together with said first data and said second data according to said rule set to define said spatial arrangement of said structural components.

Claim 31 (Currently Amended): The system according to claim 30, wherein:

said means for storing further stores fourth data ~~that~~ respectively ~~define~~ defining surrounding components including one or more of cabin dividers, baggage compartments, video monitors, ~~and~~ or display screens of which the arrangement will limit ~~the~~ a possible range of variants of said spatial arrangement[[,]] ; and ~~wherein~~

said means for processing ~~further processes~~ is configured to process said fourth data together with said first data, said second data, and said third data according to said rule set to define said spatial arrangement of said structural components.

Claim 32 (Original): The system according to claim 31, wherein said surrounding components include said baggage compartments, which further serve as carriers for equipment and for electrical interfaces of said service channel.

Claim 33 (Currently Amended): The system according to claim 32, wherein:

said fourth data define said baggage compartments as a row of successive ones of said baggage compartments[[,]] ; and ~~wherein~~

said means for processing automatically adapts said fourth data defining said row of baggage compartments according to said rule set.

Claim 34 (Currently Amended): The system according to claim 30, wherein said third data ~~is~~ are selected and read out from a cabin outfitting component reference database in

which said third data are stored among data defining plural different available cabin outfitting components.

Claim 35 (Currently Amended): The system according to claim 29, wherein:
said means for storing stores said second data in a component reference database that contains data defining plural different available structural components[[,]] ; and ~~wherein~~
said second data is are selected and read out from said component reference database.

Claim 36 (Currently Amended): The system according to claim 29, wherein:
said at least one partial space within said aircraft cabin further comprises another space other than said service channel in said aircraft cabin[[,]] ; and ~~wherein~~
said means for processing further defines a spatial arrangement of other components within said another space.

Claim 37 (Original): The system according to claim 28, wherein said means for storing loads a data set defining a customer-approved preliminary cabin layout into said data processing system through a data input interface.

Claim 38 (Original): The system according to claim 21, wherein said means for storing stores said second data in at least one reference database that contains parametric data defining various different structural components.

Claim 39 (Original): The system according to claim 21, wherein said installation space is a space within a transport vehicle other than an aircraft.

Claim 40 (Original): The system according to claim 21, wherein said installation space is an industrial plant, and said arrangement of structural components forms assembled equipment in said plant.

Claim 41 (New): The system according to claim 1, wherein said processor is configured to optimize a configuration of said structural components relative to each other within said installation space with respect to both a functional position of each one of said structural components and a quantity of said structural components arranged in said installation space.

Claim 42 (New): The system according to claim 1, further comprising a document generating tool including a processing program, wherein said processor is configured to use said document generating tool and generate production documents including drawings and at least one of parts lists, materials lists, video preliminary examinations, plotter plans, installation plans, production plans, or production contracts, corresponding to said spatial arrangement defined by said processor.

Claim 43 (New): The system according to claim 1, wherein said installation space is a space within an aircraft.

Claim 44 (New): The system according to claim 1, wherein said installation space is an aircraft industrial plant, and said arrangement of structural components forms assembled aircraft equipment in said aircraft industrial plant.

Claim 45 (New): The system according to claim 21, wherein said processor is configured to optimize a configuration of said structural components relative to each other within said installation space with respect to both a functional position of each one of said structural components and a quantity of said structural components arranged in said installation space.

Claim 46 (New): The system according to claim 21, further comprising means for generating a document including a processing program, wherein said means for processing is configured to use said means for generating and generate production documents including drawings and at least one of parts lists, materials lists, video preliminary examinations, plotter plans, installation plans, production plans, or production contracts, corresponding to said spatial arrangement defined by said means for processing.

Claim 47 (New): The system according to claim 21, wherein said installation space is a space within an aircraft.

Claim 48 (New): The system according to claim 21, wherein said installation space is an aircraft industrial plant, and said arrangement of structural components forms assembled aircraft equipment in said aircraft industrial plant.